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C-A OPERATIONS PROCEDURES MANUAL

8.16.2 Operating the LINAC Cooling Tower System

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Hand Processed Changes

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Approved: _____ [Signature On File](#) _____
Collider-Accelerator Department Chairman Date

R. Grandinetti

8.16.2 Operating the LINAC Cooling Tower System

1. Purpose

To provide operating instructions to the Water Systems technicians for the operation of the LINAC cooling tower system.

2. Responsibilities

Mechanical services technicians start and stop this system.

3. Prerequisites

- 3.1 Startup - None.
- 3.2 Shutdown - Request permission from LINAC control.
- 3.3 Qualified and trained Water Systems technicians.

4. Precautions

- 4.1 Tower - Do not reverse tower fan until fan has come to a complete stop. When switching fan from high speed to low speed, turn fan to off for a minimum of twenty seconds prior to placing in low speed.
- 4.2 Pumps - Do not operate pumps without water or with valves closed.

5. Procedure

- 5.1 Verify that the tower basin is full.
- 5.2 Open suction and discharge valves on selected pump.
- 5.3 Roll pump shaft by hand.
- 5.4 Position tower diverting valve H.O.A switch to auto position.
- 5.5 Vent air from pump casing.
- 5.6 Turn on pump main and secondary circuit breakers.

- 5.7 Start pump at local start/stop station.
- 5.8 Check pump discharge pressure (60 psi) for normal operating pressure, observe the leak rate at packing, and adjust packing glands if necessary.
- 5.9 Restore alarms.
- 5.10 Turn on tower fan circuit breaker.
- 5.11 Start fan manually in forward, slow speed, and observe that the fan operates properly.
- 5.12 Place fan in automatic control.
- 5.13 For shutdown, turn tower fan to off, turn off pump, close suction and discharge valves, and secure alarms.

6. Documentation

- 6.1 Fill in "Status of Equipment" log for LINAC tower fan and pump.

7. References

- 7.1 LINAC flow diagram, C.T. Main Drawing #2484-402-MI.

8. Attachments

- 8.1 [C-A-OPM-ATT 8.16.1.a, "C-A Mechanical Service Status of Equipment Log".](#)